

**BY ORDER OF THE COMMANDER  
AIR EDUCATION AND TRAINING  
COMMAND**



**AETC INSTRUCTION 11-204**

**1 JANUARY 2003**

***Flying Operations***

***RUNWAY SUPERVISORY UNIT (RSU)  
OPERATIONS***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**NOTICE:** This publication is available digitally on the AFDPO WWW site at:  
<http://www.e-publishing.af.mil>.

---

OPR: HQ AETC/DOFV (Mr Don Graham)  
Supersedes 19 AFI 11-204, 10 April 2001

Certified by: HQ AETC/DOF (Lt Col C. Johnson)  
Pages: 47  
Distribution: F

---

This instruction implements AFD 11-2, *Aircraft Rules and Procedures*, and prescribes requirements for RSU control of air traffic by AETC training wings, flying training wings, and groups to include ENJJPT, and flying squadrons. It complements related instructions in Federal Aviation Administration (FAA) regulations and handbooks and applicable Air Force directives. Submit suggestions or recommendations to improve RSU management or this instruction to HQ AETC/DOFV, 1 F Street, Suite 2, Randolph AFB TX 78150-4325. HQ AETC/DOF maintains waiver authority where it is not otherwise delegated to the operations group commander (OG/CC). See [Attachment 1](#) for a glossary of references and supporting information.

This publication does not apply to Air National Guard or Air Force Reserve Command units. Maintain and dispose of records created as a result of prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedule*.

***SUMMARY OF REVISIONS***

**This document is substantially revised and must be completely reviewed.**

This publication replaces 19 AFI 11-204, it expands on the discussion of responsibilities with respect to the RSU program ([Chapter 1](#)), adds guidance on RSU staffing to include expanded guidance on the use of a runway monitor during student training as well as guidance on frequency of supervisory visits ([Chapter 2](#)), expands RSU crew training requirements ([Chapter 3](#)), places increased emphasis on training documentation ([Chapter 4](#)), updates RSU currency and quarterly RSU meeting guidance ([Chapter 5](#)), includes expanded coverage on specifics of RSU priorities and expectations as well as an increased emphasis on RSU training to recognize conflicts and how to resolve them ([Chapter 6](#)), clarifies the concept of preventative control, adds emphasis to controller and observer coordination with respect to proper CRM and handoff responsibilities, and adds more definitive communication examples (but still stress the need for controller judgment). This instruction prescribes AETC Forms 309, 355, 360, 393, and 1163,

which replace 19 AF Forms 309, 355, 360, 393, and 1163, respectively. In addition, it makes 19 AF Form 361 obsolete.

<b>Chapter 1— RESPONSIBILITIES</b>	<b>5</b>
1.1. Terms. ....	5
1.2. Flying Training Wing Responsibilities. ....	5
1.3. OG/CC Responsibilities. ....	5
1.4. RSU Program Manager Responsibilities. ....	6
1.5. RSU Training and Standardization Officer (RSUTSO) Responsibilities. ....	6
1.6. SQ/CC Responsibilities. ....	7
1.7. RSUTO Responsibilities. ....	7
1.8. RSU Facility Officer Responsibilities. ....	8
1.9. T-1 RSU Monitor Program: ....	8
<b>Chapter 2— RSU REQUIREMENTS</b>	<b>10</b>
2.1. Overview. ....	10
Table 2.1. RSU Requirements. ....	10
2.2. RSU Staffing. ....	11
Table 2.2. T-6, T-37, and T-38 RSU Staffing. ....	11
2.3. Supervisory Visits. ....	11
2.4. Equipment and Maintenance: ....	12
2.5. Handling and Storage Procedures for Flares and Flare Pistols: ....	14
<b>Chapter 3— CREW QUALIFICATION AND DUTIES</b>	<b>15</b>
3.1. Controller Qualification: ....	15
3.2. Instructor Controller Qualification. ....	15
3.3. Controller Duties. ....	15
3.4. Monitor Qualification: ....	17
3.5. Instructor Monitor Qualification. ....	17
3.6. Monitor Duties. ....	17
3.7. Observer Qualification: ....	18
3.8. Instructor Observer Qualification. ....	18
3.9. Observer Duties. ....	18
3.10. Spotter Qualification and Duties. ....	19

3.11. Recorder Qualification and Duties. ....	19
<b>Chapter 4— QUALIFICATION TRAINING PROGRAMS</b>	<b>20</b>
4.1. Controller Training. ....	20
4.2. Monitor Training. ....	20
4.3. Observer Training. ....	21
4.4. Training Documentation. ....	22
<b>Chapter 5— CURRENCY REQUIREMENTS AND RESTRICTIONS</b>	<b>23</b>
5.1. Currency Documentation. ....	23
5.2. Flight Currency, Medical, and Crew Duty Day Restrictions: ....	23
5.3. Controller Currency: ....	23
5.4. Monitor Currency: ....	24
5.5. Observer Currency: ....	24
5.6. Quarterly RSU Standardization Meeting: ....	24
5.7. Controller Performance Evaluations: ....	25
5.8. Controller No-Notice Evaluations: ....	25
<b>Chapter 6— TRAFFIC PATTERN OPERATIONS</b>	<b>26</b>
6.1. Conduct of Operations: ....	26
6.2. Aircraft Control: ....	26
6.3. Procedures at UFT Bases: ....	27
6.4. Concurrent T-6 and T-37 Operations: ....	29
<b>Chapter 7— LOCAL AREA PROCEDURES</b>	<b>31</b>
7.1. Terminal Instrument Procedures (TERPS). ....	31
7.2. Aircraft Traffic Patterns. ....	31
7.3. Forms Prescribed. ....	31
7.4. Forms Adopted. ....	32
<b>Attachment 1— GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION</b>	<b>33</b>
<b>Attachment 2— RSU INSPECTION CHECKLIST</b>	<b>35</b>
<b>Attachment 3— SYLLABUS REQUIREMENTS FOR RSU CONTROLLER CANDIDATES</b>	<b>37</b>

<b>Attachment 4— STANDARD RSU RADIO TERMINOLOGY</b>	<b>40</b>
<b>Attachment 5— REDUCED SAME RUNWAY SEPARATION (RSRS) FOR TRAINER-TYPE AIRCRAFT OPERATIONS</b>	<b>45</b>
<b>Attachment 6— TRAFFIC PATTERNS FOR HOME AND AUXILIARY FIELDS</b>	<b>46</b>

## Chapter 1

### RESPONSIBILITIES

**1.1. Terms.** Runway supervisory unit (RSU) and runway control structure (RCS) are used interchangeably in this instruction.

**1.2. Flying Training Wing Responsibilities.** Wing commanders will ensure RSUs are located opposite the touchdown zone and, when possible, on the side of the runway opposite the direction of break. Clearance to the edge of the active runway must conform to the clearance criteria in AFJMAN 32-8008, Volume 1, *General Provisions for Airfield/Heliport Pavement Design*.

**1.3. OG/CC Responsibilities.** The OG/CC is responsible for every aspect of the flying environment; specifically, oversight of the RSU program. The OG/CC will: (**NOTE:** For the 479 flying training group (FTG), all references to the “OG/CC” in this instruction apply to the 479 FTG/CC.)

1.3.1. Ensure each RSU position is manned by adequately trained and certified personnel.

1.3.2. Appoint an RSU program manager in writing at the operations group standardization/evaluation (OGV) level. A copy of the appointment memorandum will be maintained in the program continuity binder.

1.3.3. Appoint T-37, T-6, and T-38 RSU training and standardization officers (RSUTSO) in writing. A copy of each appointment memorandum will be maintained in the program continuity binder. **EXCEPTION:** The OG/CC at Sheppard AFB will appoint one T-37 and one T-38 RSUTSO selected from RSU training officers (RSUTO) nominated by their SQ/CCs. The 89th and 90th flying training squadron commanders (FTS/CC) will each nominate a RSUTO, and the 88th FTS/CC will nominate one T-37 and one T-38 RSUTO.

1.3.4. Review and certify all controller AETC Forms 309, **RCS/RSU Crewmember Evaluation and Qualification Certificate**.

1.3.5. Review the training records and circumstances of controllers who exceed 90-day currency requirements to determine their suitability to remain in the RSU program. Document this review in the individual’s training folder.

1.3.6. Ensure RSU control is provided to AETC home station aircraft only. **NOTE:** This does not prevent an RSU controller from offering advice to other aircraft to prevent an accident. Advisories will be relayed through the tower if time and conditions permit.

1.3.7. Establish procedures defining transfer of runway and air traffic control responsibility from one facility to another. Overlap of control is prohibited. Granting the tower access to an RSU-controlled runway for a transient takeoff or landing does not require transfer of runway control.

1.3.8. Establish procedures to resolve conflicts between tower-controlled aircraft and RSU-controlled aircraft that are overshooting the final turn.

1.3.9. Establish procedures to ensure RSU-controlled traffic is separated from arriving and departing transient aircraft. (AETC like-type aircraft are not considered transient.)

1.3.10. Establish procedures to relinquish RSU control of a runway to the tower when weather conditions prevent visual flight rules (VFR) traffic patterns.

1.3.11. Establish procedures to use if RSU or control tower communications fail.

**1.4. RSU Program Manager Responsibilities.** The RSU program manager will:

1.4.1. Maintain overall control of the RSU program and be the OG/CC's point of contact on RSU issues. The RSU program manager will be a current RSU controller.

1.4.2. Limit RSU occupancy as follows:

1.4.2.1. A large RSU is authorized a maximum of 10 individuals inside at one time.

1.4.2.2. A small RSU is authorized a maximum of six individuals inside at one time.

1.4.3. Keep a permanent visitor's log or develop a process to verify that all orientation and required supervisory visits are accomplished.

1.4.4. Ensure the controller is seated at the end of the unit closest to the runway approach end and the observer is seated at the opposite end.

1.4.5. Forward all open RSU discrepancies to the OG/CC at the beginning of each flying week.

1.4.6. Observe Class A RSU operations at least once per month for a minimum of 1 hour. Visits will vary between each type of aircraft and be documented on AETC Form 1163, **RCS/RSU Supervisor's Critique**.

1.4.7. Review and provide AETC Forms 1163 to the respective T-37, T-6, or T-38 Squadron Commander (SQ/CC) and RSUTSO.

1.4.8. Use operational risk management (ORM) principles, where appropriate, in building necessary control measures into the RSU program. As examples, use ORM to mitigate risk in RSU operations relating to solo students, poor or adverse weather, or crowded patterns during which continued control and supervision may be in question. These are all cases where risk analysis and elevating concerns to more experienced and qualified supervisors, such as the TOP 3 or OG/CC, may be wise.

1.4.9. Establish a currency requirement tracking system for all personnel in the RSU program.

**1.5. RSU Training and Standardization Officer (RSUTSO) Responsibilities.** Each RSUTSO will:

1.5.1. Be a qualified instructor controller.

1.5.2. Establish and supervise RSU program and crew training in accordance with **Chapter 4**, to include developing and maintaining written qualification examinations.

1.5.3. Administer, document, and route required controller AETC Forms 309.

1.5.4. Conduct quarterly RSU standardization meetings at a time and place that will ensure maximum attendance according to paragraph **5.6**.

1.5.5. Conduct instructor upgrade briefings.

1.5.6. Conduct no-notice evaluations in accordance with paragraph **5.8**.

1.5.7. Review all AETC Forms 1163 and keep them on file for 1 year.

1.5.8. For RSU facilities with an auxiliary power unit (APU) requirement:

- 1.5.8.1. Establish a training program with local power production personnel to ensure all controllers and observers are certified in APU operations.
- 1.5.8.2. Evaluate and document APU operating procedures on initial and periodic controller evaluations and during initial observer and monitor training.
- 1.5.8.3. Ensure all RSU personnel annually review APU procedures.
- 1.5.9. Ensure current copies of the following documents are available for use in active RSUs:
  - 1.5.9.1. Flying directives and operating manuals.
  - 1.5.9.2. Aircraft flight manuals.
  - 1.5.9.3. Quick-reaction checklists.
  - 1.5.9.4. Local area maps marked with prominent landmarks and emergency fields.

**1.6. SQ/CC Responsibilities.** Each T-37, T-6, and T-38 SQ/CC will:

- 1.6.1. Select and appoint the minimum number of personnel required to safely accomplish RSU operations.
- 1.6.2. Establish a continuing education program for the instructor force covering all aspects of RSU pattern operations.
- 1.6.3. Ensure controllers are evenly distributed throughout the squadron. Each flight should normally have at least one assigned controller.
- 1.6.4. Review and sign monitor and observer AETC Forms 309.
- 1.6.5. Appoint a RSUTO. **EXCEPTION:** T-37 and T-6 squadrons may share RSUTSO and RSUTO appointments.
- 1.6.6. Appoint an RSU facility officer. **NOTE:** If the RSUTSO or RSUTO serves as the facility officer, no additional appointment is required. Civilian contractors used in this capacity will comply with their statement of work (SOW).
- 1.6.7. Review the training records and circumstances of controllers who exceed 30-day currency requirements (45 days for the 12 FTW) and ensure all instances, regardless of duration, are documented in the controller's training folder.

**1.7. RSUTO Responsibilities.** Each T-37, T-6, and T-38 RSUTO will:

- 1.7.1. Be a qualified instructor controller.
- 1.7.2. Ensure an accurate quarterly traffic count for each RSU operation is furnished to the wing air-space office no later than 5 workdays after the end of each quarter.
- 1.7.3. Administer, document, and route required controller AETC Forms 309.
- 1.7.4. Maintain training folders on all controllers, monitors, and observers according to [Chapter 4](#).
- 1.7.5. Track RSU crew currency.
- 1.7.6. Ensure development of the master RSU schedule.

1.7.7. Maintain AETC Forms 355, **Runway Control Structure (RCS)/Runway Supervisory Unit (RSU) Log**, or equivalent electronic form to show dates and runways on which each controller, monitor, and observer performs duty. In the case of controllers, annotate whether the duty period was in a controller or monitor capacity. Retain these records for a minimum of 1 year.

1.7.8. Ensure appropriate supervisors and aircrews are informed of information derived from AETC Forms 355.

1.7.9. Conduct no-notice evaluations in accordance with paragraph [5.8](#).

1.7.10. Accomplish duties assigned by the RSUTSO.

**1.8. RSU Facility Officer Responsibilities.** Each T-37, T-6, and T-38 RSU facility officer will:

1.8.1. Ensure all items listed in paragraph [2.4.5](#) are operational, as applicable, at each RSU facility and provide weekly inputs to the OGV program manager.

1.8.2. Ensure AETC Form 360, **Runway Control Structure (RCS)/Runway Supervisory Unit (RSU) Discrepancy Log**, is used to document RSU discrepancies. Open AETC Form 360 write-ups will be maintained in the RSU.

1.8.3. At the beginning of each flying week, notify the RSU program manager of open AETC Form 360 write-ups.

1.8.4. Maintain a file of completed AETC Forms 360 for each RSU. Retain the file for a minimum of 1 year from the date corrective action is completed (or longer if required to adequately track trend items).

1.8.5. Conduct a monthly inspection of RSU structure and component equipment, using a checklist that includes the items in [Attachment 2](#).

1.8.6. Maintain a copy of the inspection results for 1 year.

1.8.7. Maintain a permanent record for each RSU, using AFTO Form 95, **Significant Historical Data**. This record will contain major modifications or repairs to the structure and component equipment. HQ AETC/SCML will review requests for modification of communications equipment. **NOTE:** No modifications will be made to standard RSU design and equipment without the approval of HQ AETC/DOF and HQ AETC/CE.

**1.9. T-1 RSU Monitor Program:**

1.9.1. The OG/CC may use T-1 aircrew in the RSU monitor program.

1.9.2. The program may stand alone or be combined within an existing T-37, T-6, or T-38 program, as follows:

1.9.2.1. If the program stands alone, all provisions in this instruction must be followed (RSUTO, RSUTSO, RSU meetings, etc.) and all training will be conducted IAW this instruction. The RSUTSO and RSUTO will comply with all requirements in paragraphs [1.5](#) and 1.7, except they will maintain instructor monitor status.

1.9.2.2. If the program is combined with another program, the T-1 SQ/CC will appoint an instructor monitor as the T-1 monitor program RSUTO. This person will be the focal point for all RSU



issues in the T-1 squadron and will work with host RSUTSOs and RSUTOs from the T-37, T-6, and T-38 squadrons to ensure the requirements of paragraph 1.7. are met.

1.9.3. If T-1s are involved with the RSU monitor program, T-1 squadron supervisors (CC, DO) will observe a Class B RSU once every 6 months.

## Chapter 2

### RSU REQUIREMENTS

**2.1. Overview.** Guidance cannot cover all situations, and supervisors are expected to use sound judgment in determining the requirement for an RSU. The intent is to provide RSU supervision for the majority of local undergraduate flying training (UFT) and pilot instructor training (PIT) flying operations; in particular, multiple landings during periods of student training and solo student operations. **Table 2.1.** lists RSU requirements.

**Table 2.1. RSU Requirements.**

<b>I T E M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>Type of Operations</b>	<b>Class A Required</b>	<b>Class B Required</b>	<b>No RSU Required</b>
<b>1</b>	T-6, T-37, and T-38 student flying at home or auxiliary fields in an RSU-controlled pattern	X		
<b>2</b>	Solo student sorties at the home field (notes 1 and 2)	X		
<b>3</b>	Dual student sorties under tower control at the home field (note 3)		X	
<b>4</b>	Dual cross-country or out-and-back departures and returns and T-1 sorties			X
<b>5</b>	Randolph operations (note 4)			X
<b>6</b>	T-1, T-6, T-37, and T-38 student sorties, dual or solo, at other than home or auxiliary fields (note 5)			X
<b>7</b>	Nonstudent sorties			X
<b>8</b>	One full-stop landing and one takeoff by aircraft used to transport RSU crews to and from the auxiliary field (note 6)			X

**NOTES:**

1. T-38 supervised solo or T-1 team out-and-back sorties do not require an RSU when departing or returning for one pattern to a full stop at the home field.
2. Solo students in formation may depart or return (one pattern to a full stop) under tower control.
3. The OG/CC may waive RSU requirement after an appropriate risk assessment.
4. Randolph auxiliary airfield operations require a Class A RSU.
5. T-38 supervised solo or T-1 team out-and-back sorties: Prior to any students arriving, landing, or departing an out base, an assistant flight commander or above will be in place in the control tower. He or she will have the proper publications, act as the onscene mission commander, and advise the air traffic controller in emergency situations. Personnel performing this duty must not inter-

ferre with control tower operations. OG/CCs may grant exceptions to this requirement on a case-by-case basis. For example, a Class A RSU and a supervisor of flying (SOF) are in place at the out base and the onscene commander has relayed the call signs of all aircraft in the deployment to the current SOF.

6. Opening RSU crews will check the condition of the auxiliary field's runway by conducting a low approach before landing.

**2.2. RSU Staffing.** The RSU will be staffed according to operational requirements in [Table 2.2](#).

**Table 2.2. T-6, T-37, and T-38 RSU Staffing.**

I T E M	A	B	C
	Condition	Home Field	Auxiliary Field
<b>Class A</b>			
<b>1</b>	Day	Controller, observer, spotter, and recorder	Controller and observer
<b>2</b>	Night	Controller, observer, spotter, and recorder (note 1)	Not applicable
<b>Class B</b>			
<b>3</b>	Day or Night	Monitor (as a minimum) (note 2)	Monitor

**NOTES:**

1. The night spotter requirement applies only to T-37 RSUs.
2. Monitors qualified in one type of aircraft may monitor initial takeoffs, touch-and-go landings, and full-stop landings performed by another type of aircraft.

**2.3. Supervisory Visits.** The purpose of supervisory visits is to demonstrate full support for and close supervision of the RSU program. Supervisors will monitor RSU crew performance, aircrew compliance with traffic pattern procedures, and overall radio discipline. In addition, supervisors will use the AETC Form 1163 to record their observations during each visit. Completion of this form is mandatory. AETC Forms 1163 will be reviewed by the RSUTSO and sent (as a minimum) to the OGV program manager, facility manager (if facility related), and SQ/CC for review. The minimum frequency of supervisory visits is as follows:

2.3.1. The OG/CC will observe Class A RSU operations at least once per quarter for a minimum of 1 hour. The operations group deputy commander (OG/CD) and RSU program manager will observe Class A RSU operations at least once per month for a minimum of 1 hour. Visitation to each home and auxiliary field RSU is highly encouraged during each quarter. **EXCEPTION:** The 12 FTW OG/CD will observe Class A RSU operations at least once per quarter for a minimum of 1 hour.

2.3.2. T-37, T-6, and T-38 squadron supervisors (CC, DO, ADOs, and flight CCs) will observe Class A RSU operations in their respective RSUs at least once per month. T-37 and T-6 supervisors will alternate monthly visits between the home and auxiliary field.

2.3.3. The 558th and 560th CC, DO, or ADO may alternate RSU visits, but each CC will ensure supervisory visitation occurs on a monthly basis. Flight CC participation is encouraged, but not required.

## 2.4. Equipment and Maintenance:

2.4.1. Because RCSs are considered real property, they will be supported and maintained by base civil engineering units. RSUs, however, are not real property, and maintenance is the responsibility of the using organization. Base civil engineering will maintain the supporting pads, emergency backup generator, and air-conditioning, which are real property installed equipment. HQ AETC/SCML will review requests for modification of communications equipment.

2.4.2. RSU crews will notify the appropriate agency of any maintenance discrepancy and obtain a job control number and an estimated completion time.

2.4.3. For onsite repairs, the individual providing the repair will complete the appropriate portions of AETC Form 360, showing actions taken, and notify the RSU facility officer. If no cause can be determined, the corrective action block will be annotated with "Could not duplicate." The RSU facility officer will be notified. **NOTE:** Repeat intermittent operation write-ups with no determined cause will require a thorough inspection of affected system components.

2.4.4. Maintenance personnel will document removal and replacement of RSU communications equipment on AETC Form 360 to include serial numbers, if applicable.

2.4.5. The RSU facility officer or appointed alternate will ensure the following equipment is in operational condition at each RSU site, as applicable:

2.4.5.1. Radios. Radios must provide transmit, receive, and record capability on local operating and guard frequencies. (**NOTE:** Radios currently without record capability will be upgraded as soon as possible.) With OG/CC approval, an RSU may open or remain open with only one operational radio and guard channel, providing both have transmit and receive capability. This should be considered a temporary configuration to allow operations while the inoperative radio is expeditiously repaired. Each RSU is equipped with an RSU upgrade position that will override transmissions from the trainee's position. Priority is established in AFI 13-203, *Air Traffic Control*.

2.4.5.2. Telephones. Each unit should have a minimum of one Class C telephone line and two telephones.

2.4.5.3. Hotlines. Hotlines must be available to ensure direct contact with the following:

2.4.5.3.1. Tower. **NOTE:** Auxiliary fields are exempt.

2.4.5.3.2. Ground control approach (GCA) or terminal radar facility at RSUs serving runways where precision approach radar or airport surveillance radar (ASR) approaches are flown (except emergency-only ASRs).

2.4.5.3.3. SOF. **NOTE:** The tower and SOF may share the same line if the activities are collocated.

2.4.5.3.4. Crash or rescue at auxiliary fields.

2.4.5.3.5. Other RSUs serving parallel runways, as necessary.

2.4.5.3.6. Other agencies as required. **NOTE:** A hotline is the preferred method from auxiliary field RSUs. However, “executive override” on an auxiliary field RSU Class C telephone may be used when hotline installation is not available.

2.4.5.4. Flare pistols or other authorized pyrotechnic devices. At least two flare pistols and six flare cartridges must be in place and operable at the start of flying. **NOTE:** Hondo auxiliary airfield is exempt from this requirement, but the RSUTSO will test the backup communication system monthly.

2.4.5.5. Light gun.

2.4.5.6. Binoculars. Two sets of binoculars at home field and one set at the auxiliary field are required.

2.4.5.7. Wind-measuring equipment:

2.4.5.7.1. At the home field, a temporary operation without this equipment is acceptable when alternate procedures (such as a tower) are established to obtain accurate wind information. At the auxiliary field, a temporary operation without this equipment is acceptable with OG/CC approval after close scrutiny of current and forecasted weather and winds. In either case, this should be considered only a temporary configuration to allow operations while the equipment is expeditiously repaired.

2.4.5.7.2. To determine the maximum gust factor, RSU and SOF personnel will divide the gust spread in half and add it to the wind speed.

2.4.5.8. Portable toilet facilities.

2.4.5.9. Air-conditioner and heater. An air-conditioner and heater, capable of maintaining temperatures within the RSU between 70 and 80 °F, is required.

2.4.5.10. Auxiliary power unit (APU). An APU capable of supporting essential RSU equipment (including air-conditioner) during commercial power outages is required. (**EXCEPTION:** APUs are not required to be pre-positioned at RSUs if the OG/CC and base civil engineer jointly concur that predicted reliability of commercial power is sufficient to satisfy unit RSU and divert requirements.) For RSU facilities with an APU requirement:

2.4.5.10.1. Facility managers will ensure an auto-start feature is available and enabled, if so equipped.

2.4.5.10.2. RSUTSOs will establish a training program with local power production personnel to ensure all controllers and observers are certified in APU operations.

2.4.5.10.3. RSUTSOs or RSUTOs, as applicable, will evaluate and document APU operating procedures on initial and recurring controller or monitor evaluations and during initial observer training.

2.4.5.10.4. RSUTSOs or RSUTOs, as applicable, will ensure all RSU personnel annually review APU procedures.

2.4.5.11. BAK-15 Barrier. The BAK-15 will be tested at the beginning of each flying week. With OG/CC approval, an RSU may open or remain open with an inoperable BAK-15 barrier. However, this should be considered only a temporary configuration to allow operation while the barrier is expeditiously repaired.

**2.5. Handling and Storage Procedures for Flares and Flare Pistols:**

2.5.1. Because flares and flare pistols are classified as munitions and firearms, RSU personnel handling them must apply the special security and storage procedures in AFI 31-101, *The Air Force Physical Security Program*, and AFMAN 91-201, *Explosive Safety Standards*.

2.5.2. RSU personnel who handle flares and flare pistols must complete initial and recurring training according to AFMAN 91-201. They must also comply with the following procedures:

2.5.2.1. Load flare pistols only after they are installed in a flare port. Unload the pistol before removal from a flare port.

2.5.2.2. If a dry firing check is required, install the flare pistol in the flare port before firing.

2.5.2.3. Leave the breech open when the flare pistol is not secured in the flare port.

2.5.2.4. If a flare fails to fire, make two more attempts. If the flare still fails to fire, use the other pistol. Wait at least 30 seconds after a misfire, then open the breech, unload the pistol, and examine the flare for primer indentation by the firing pin.

2.5.2.5. If an indentation exists, reload the pistol with a new flare, place the misfired flare into a container marked "misfired flares," and place the container outside the RSU.

2.5.2.6. If no indentation exists, remove the pistol from service and have it checked by qualified personnel.

2.5.3. Bases will establish local procedures for disposal of the misfired flares as well as inspection and maintenance of pistols and their mounts.

## Chapter 3

### CREW QUALIFICATION AND DUTIES

#### 3.1. Controller Qualification:

3.1.1. The SQ/CC will select the minimum number of controllers necessary to satisfy mission requirements, attempting to ensure an overall balance between first assignment instructor pilot (FAIP) and major weapon system (MWS) personnel.

3.1.2. RSU controllers will be selected from the most highly qualified and current instructors pilots (IP) with at least 6 months IP experience in current aircraft and a minimum of 90 days of experience as an observer or monitor. (**EXCEPTION:** T-6 qualified pilots who have undergone controller training as T-37 pilots may be selected to control aircraft immediately after their return from PIT, provided they have undergone a T-6 familiarization program developed by the RSUTSO.) Controller candidates, regardless of previous experience or qualification, will complete the initial qualification controller syllabus outlined in [Attachment 3](#). Proficiency advancement is authorized at the discretion of the OG/CC.

3.1.3. The initial qualification evaluation should include all aspects of a normally scheduled RSU tour (crew brief, control of overhead traffic, de-brief, etc.). The tour length will be an entire scheduled tour. Periodic evaluations should be planned for 2 hours minimum. Before controlling traffic at night, a minimum of one night on-the-job-training (OJT) tour (minimum of 2 hours) is required. If the night tour has not been accomplished, the Letter of Xs will reflect a day only qualification.

3.1.4. After completion of the initial evaluation, but prior to performing unsupervised controller duties, the OG/CC must interview the candidate and sign the AETC Form 309. The SQ/CC will ensure the Letter of Xs is updated to reflect this certification. Currency requirements and the evaluation zone are based on the day and month of the evaluation. Subsequent AETC Forms 309 will be reviewed and signed by the OG/CC.

3.1.5. If a controller fails the initial or periodic evaluation, the evaluator will document outcome on the AETC Form 309. The RSUTSO or RSUTO will consult with the individual's SQ/CC to determine whether the controller should be retrained or withdrawn from the program. If training is continued, the controller will complete the recommended retraining and accomplish the evaluation. **NOTE:** Current controllers who were RSU instructors (observer or monitor) prior to controller upgrade may perform instructor monitor or instructor observer duties. All night RSU operations require a night qualification.

**3.2. Instructor Controller Qualification.** The SQ/CC will designate the minimum number of controllers necessary to perform instructor controller duties. Candidates must have 6 months of current controller experience or have accomplished 20 tours. Prior to performing instructor controller duties, trainees will receive an instructor controller briefing from the RSUTSO. Instructor controllers will be tracked on the Letter of Xs.

**3.3. Controller Duties.** The RSU controller is responsible for the safe and efficient control of all aircraft under the RSU's jurisdiction, including air discipline, pattern conformity, and compliance with established procedures. However, he or she is not responsible for individual aircrew training requirements. The RSU controller will:

- 3.3.1. Use preventive control procedures to ensure flight safety within the RSU pattern.
- 3.3.2. Resolve pattern conflicts, using whatever means necessary (to include “plain English”).
- 3.3.3. Issue traffic priority to emergency and minimum fuel aircraft.
- 3.3.4. Positively identify solos, particularly Commander's Awareness Program (CAP) solos, at all times and issue traffic priority as the situation dictates.
- 3.3.5. Before each tour, brief the observer, spotter, and recorder on their duties.
- 3.3.6. Focus attention on the lowest, slowest airborne aircraft within his or her primary area of responsibility (AOR). The controller is responsible for the entire pattern. However, his or her primary AOR should emphasize that part of the traffic pattern from initial to overhead the RSU, from closed downwind abeam the RSU to the perch (high key or base key), and from the final turn through the final approach and touchdown zone.
- 3.3.7. Verbalize handoffs of overheads, long landings, and go-arounds. **NOTE:** Verbal handoffs are designed to prevent unnecessary overlap between AORs. Controllers may need to glance into the observer's AOR for situational awareness, but should not use this technique repeatedly as a substitute for good cockpit/crew resource management (CRM).
- 3.3.8. Ensure proper use of AETC Form 355 or equivalent to record takeoff and landing times and pattern comments.
- 3.3.9. Initiate a preliminary communications search when a single-ship local student solo sortie has been airborne for 1 hour. Increase this time to 1+20 for other T-38 sorties, 1+25 for other T-37 sorties, 1+45 for other T-6 sorties, and 3+10 for other T-1A sorties. Notify the SOF if the preliminary communications search is unsuccessful.
- 3.3.10. Advise the SOF if weather observed is incompatible with the current flying status. In coordination with the SOF, take immediate action when unforecasted weather dictates.
- 3.3.11. As appropriate, announce landing direction, pattern status, wake turbulence advisories, pattern trends, and winds to facilitate safe and efficient pattern operations.
- 3.3.12. As appropriate, announce bird condition, advisories on the location and flight path of any large influx of birds in the vicinity of the airfield, activities of other aircraft that may affect the traffic pattern, and other conditions that may affect safety of operations.
- 3.3.13. Ensure aircraft-arresting barriers are operational and in the proper position before clearing aircraft for takeoff or landing.
- 3.3.14. Ensure aircraft are visually checked for proper configuration before takeoff or landing.
- 3.3.15. Report deviations from established procedures to the appropriate squadron supervisor.
- 3.3.16. When emergency situations arise, do not attempt to maintain the normal volume and pace of pattern operations. To maintain situational awareness on the emergency aircraft, consider using any combination of the following: stop launch, stop pattern entries, restricted low approach, straight through initial, etc. Time permitting, review emergency procedures with the aircraft and coordinate actions with the SOF. When an emergency aircraft in the VFR pattern requires airborne assistance, designate an aircraft with an instructor onboard to fly as chase.
- 3.3.17. Notify base operations if an aircraft disturbs the down barrier in the approach end overrun.



3.3.18. Not permit other duties (upgrades, phone calls, facility maintenance, etc.) to distract attention from his or her primary controller responsibilities.

### 3.4. Monitor Qualification:

3.4.1. The SQ/CC will select the minimum number of monitors necessary to satisfy mission requirements.

3.4.2. Monitors will be selected from the most highly qualified and current IPs with at least 3 months of IP experience accumulated during their current duty assignment. On completion of training, the RSUTSO will ensure all training is accomplished prior to the trainee's performing monitor duties.

3.4.3. The Letter of Xs will be updated to reflect monitor qualification.

3.4.4. Currency requirements will begin on the day of the last upgrade tour.

3.4.5. Monitors performing duties at night will accomplish one 2-hour night OJT tour under the supervision of a night-qualified controller or night-qualified upgrade monitor. If the night tour has not been accomplished, the Letter of Xs will reflect a day-only qualification.

**3.5. Instructor Monitor Qualification.** The SQ/CC will designate the minimum number of monitors necessary to perform instructor monitor duties. Trainees must have 3 months of current monitor experience or have accomplished 10 tours. Prior to performing instructor monitor duties, trainees will receive an instructor monitor briefing from the RSUTSO. Instructor monitors will be tracked on the Letter of Xs.

### 3.6. Monitor Duties. Each monitor will:

3.6.1. Transmit proper instructions to prevent potentially hazardous situations during takeoff and landing.

3.6.2. Ensure all aircraft are visually checked for proper configuration before takeoff or landing.

3.6.3. Focus attention on the lowest, slowest airborne aircraft.

3.6.4. Advise the SOF if observed weather is incompatible with current flying status.

3.6.5. Report deviations from established procedures to the appropriate squadron supervisor.

3.6.6. Use AETC Form 355 or equivalent to record takeoff and landing times.

3.6.7. Initiate a preliminary communications search when a single-ship local student solo sortie has been airborne for 1 hour. Increase this time to 1+20 for other T-38 sorties, 1+25 for other T-37 sorties, 1+45 for other T-6 sorties, and 3+10 for other T-1A sorties. Notify the SOF if the preliminary communications search is unsuccessful.

3.6.8. Notify base operations if an aircraft disturbs the down barrier in the approach end overrun.

3.6.9. Not permit other duties (upgrades, phone calls, facility maintenance, etc.) to distract his or her attention from primary monitor responsibilities.

**NOTE:** Monitors qualified in one type of aircraft may monitor initial takeoffs, touch-and-go landings, and full-stop landings performed by another type aircraft ([Table 2.1](#)). In additions, monitors who have transitioned directly from the observer position may perform observer duties if they maintain required observer currency requirements.

### 3.7. Observer Qualification:

3.7.1. The SQ/CC will select the minimum number of observers necessary to satisfy mission requirements.

3.7.2. RSU observers will be selected from the most highly qualified and current IPs with at least 3 months of IP experience in their assigned aircraft accumulated during their current duty assignment. The following exceptions apply:

3.7.2.1. T-6 qualified pilots who have undergone observer training as T-37 pilots may be selected to control aircraft immediately after their return from PIT, if they have undergone a T-6 familiarization program developed by the RSUTSO.

3.7.2.2. Observer trainees in the 558th and 560th FTS must be rated pilots current and qualified in the aircraft being observed.

3.7.2.3. Observer trainees in ENJPPT must have at least 1 month of experience as an IP during their current tour.

3.7.3. The RSUTSO will ensure all training is accomplished prior to the trainee performing observer duties. Observers performing duties at night will accomplish one 2-hour night OJT tour under the supervision of a night-qualified controller or night-qualified upgrade observer. If the night tour has not been accomplished, the Letter of Xs will reflect a day-only qualification. Currency requirements will begin on the day of the last upgrade tour.

**3.8. Instructor Observer Qualification.** The SQ/CC will designate (in writing) the minimum number of observers necessary to perform instructor observer duties. A copy of this memorandum will be maintained in the instructor observer's training folder. Instructor observers must have 3 months of current observer experience or have accomplished 10 tours. Prior to performing instructor observer duties, instructor observers will receive a briefing from the RSUTSO. Instructor observers will be tracked on the Letter of Xs.

**3.9. Observer Duties.** The observer is responsible for compliance with the requirements established by the controller during the briefing, but he or she is not responsible for individual aircrew training requirements. The observer will:

3.9.1. Focus attention on the lowest, slowest airborne aircraft within his or her AOR. **NOTE:** The observer's primary AOR is defined as that part of the traffic pattern from the end of the touchdown zone through the first turn out of traffic, aircraft carrying straight through initial, aircraft in the break, and closed patterns upwind of the RSU.

3.9.2. Acknowledge handoffs of overheads, go-arounds, and long landings. **NOTE:** Verbal handoffs are designed to prevent unnecessary overlap between AORs. Observers may need to glance into the controller's AOR for situational awareness, but should not use this technique repeatedly as a substitute for good CRM.

3.9.3. Inform the controller when aircraft commence the break and when departure leg or offset turn crosswind.

3.9.4. Build a verbal picture for the controller of his or her AOR and suggest a course of action. When time constraints prevent building a verbal picture, the observer will not hesitate to use the radio to prevent a conflict from developing or to ensure safety of flight.

- 3.9.5. Closely monitor the departure roll, departure leg, and landing.
- 3.9.6. Coordinate terminology for “spacing” requests during the crew briefing.
- 3.9.7. Notify the controller of deviations from established pattern procedures.

**3.10. Spotter Qualification and Duties.** The spotter must be an IP, a recent UFT graduate, or a post-solo UFT student undergoing training in the aircraft being controlled. He or she will:

- 3.10.1. Comply with the requirements established by the controller during the briefing.
- 3.10.2. Check aircraft for proper configuration before takeoff and landing and immediately notify the controller of irregularities.
- 3.10.3. Monitor aircraft in final turn and inform the controller of deviations (overshoots, higher or lower than normal final turns, configuration inconsistencies, etc.).

**3.11. Recorder Qualification and Duties.** The recorder must be an IP, a recent UFT graduate, or a student undergoing training or awaiting UFT. He or she will:

- 3.11.1. Comply with the requirements established by the controller during the briefing.
- 3.11.2. Use AETC Form 355 or equivalent to record takeoff and landing times and appropriate comments and to ensure aircraft accountability.
- 3.11.3. Inform the controller when aircraft exceed flight times listed in paragraph [3.3.9](#). or aircraft volume limitations listed in paragraph 7.2.1.3.

## Chapter 4

### QUALIFICATION TRAINING PROGRAMS

**4.1. Controller Training.** RSUTSOs will establish and supervise a controller training program that includes the following:

4.1.1. **Initial Qualification Training.** Initial qualification training will be conducted according to syllabus requirements in [Attachment 3](#). In addition, an oral and written examination on controller responsibilities and appropriate RSU directives will be accomplished prior to the evaluation.

4.1.2. **Requalification Training:**

4.1.2.1. Qualified controllers who have not accomplished a tour within the last 90 days and have been out of currency for no more than 5 years may complete requalification at the discretion of the SQ/CC.

4.1.2.2. The syllabus for requalification will be the same as for initial qualification ([Attachment 3](#)). However, proficiency advancement may be authorized at the discretion of the OG/CC after a minimum of three, 2-hour OJT tours if all syllabus items are completed. An oral evaluation, written test, APU refresher training (if applicable), and performance evaluation will be accomplished. **EXCEPTION:** The 558 and 560th FTS controller trainees, regardless of previous qualification, will follow the requalification rules.

4.1.2.3. Controller and observer upgrade training will not be conducted simultaneously.

4.1.2.4. Night requalification requires an additional 2-hour night tour.

**4.2. Monitor Training.** RSUTSOs will establish and supervise a monitor training program that includes the following:

4.2.1. **Initial Qualification Training.** Each monitor trainee will:

4.2.1.1. Review applicable RSU publications.

4.2.1.2. Observe control of overhead pattern operations for each local aircraft in which he or she is not a qualified pilot for at least 1 hour per aircraft type. **EXCEPTION:** T-1 monitor trainees will observe each aircraft type for at least 2 hours.

4.2.1.3. Actively control aircraft in which he or she is a qualified pilot during overhead pattern operations under the supervision of an instructor controller for at least 2 hours. (T-1 monitor trainees are exempt.)

4.2.1.4. Accomplish at least two 2-hour day OJT tours performing monitor duties under the supervision of an instructor monitor or instructor controller. (**NOTE:** Current controllers may perform instructor monitor duties, but they will not simultaneously control traffic and conduct monitor upgrade training.) Training will include normal monitor functions with emphasis on responsibilities during emergencies. Prior to accomplishing duties as a monitor at night, one additional 2-hour night OJT tour will be accomplished under the supervision of a night-qualified controller or instructor monitor. If a night checkout is not accomplished, the Letter of Xs will reflect a day-only qualification.

4.2.1.5. Take a 25-question, written examination on monitor responsibilities and appropriate RSU directives. The examination will be conducted prior to the final day OJT tour.

4.2.1.6. Receive an oral evaluation administered by the RSUTSO or RSUTO, covering monitor responsibilities. The RSUTSO or RSUTO, as appropriate, will sign the AETC Form 309 following completion of the evaluation.

**4.2.2. Documentation of Training.** Completion of training will be documented on AETC Form 309. The Letter of Xs will reflect this qualification. Currency requirements will begin on completion of the last OJT tour. Any loss of currency will be documented in the individual training record. The folder will be given to the individual upon his or her removal from monitor duties or a change of station.

**4.2.3. Requalification Training:**

4.2.3.1. The OG/CC will determine requirements for monitor requalification training. As a minimum, the training will include a review of all RSU directives, a 25-question, written test, and one 1-hour OJT tour with an instructor monitor or instructor controller.

4.2.3.2. A current controller may perform instructor monitor duties, but he or she will not simultaneously control traffic and conduct monitor upgrade training.

4.2.3.3. Night requalification requires an additional 2-hour night tour.

**4.3. Observer Training.** RSUTSOs will establish and supervise an observer training program that includes the following:

**4.3.1. Initial Qualification Training.** Each observer trainee will:

4.3.1.1. Review applicable RSU publications.

4.3.1.2. Accomplish a minimum of two 2-hour OJT tours under the supervision of an instructor observer or instructor controller. (**EXCEPTION:** Personnel assigned to the 558th and 560th FTS will accomplish a minimum of one 2-hour OJT tour. Both units will specify observer training and documentation in local directives. Additionally, they will only maintain training records for permanent party.) A current controller may perform instructor observer duties, but he or she will not simultaneously control traffic and conduct observer upgrade training. Training will include normal observer functions with emphasis on responsibilities during emergencies. Prior to accomplishing duties as an observer at night, one additional 2-hour night OJT tour will be accomplished under the supervision of a night-qualified instructor controller or instructor observer. If a night checkout is not accomplished, the Letter of Xs will reflect a day-only qualification.

4.3.1.3. Take a 25-question, written examination on observer responsibilities and appropriate RSU directives. The examination will be conducted prior to the final day OJT tour.

4.3.1.4. Receive an oral evaluation administered by the RSUTSO or RSUTO, covering observer responsibilities. The RSUTSO or RSUTO, as appropriate, will sign the AETC Form 309 after the evaluation has been completed.

**4.3.2. Documentation of Training.** Completion of training will be documented on AETC Form 309. Currency requirements begin on completion of the last OJT tour. Any loss of currency will be documented in the individual training record. The folder will be given to the individual upon his or her removal from observer duties or a change of station.

#### 4.3.3. **Requalification Training:**

4.3.3.1. The OG/CC will determine requirements for observer requalification training. As a minimum, the training will include a review of all RSU directives; a 25-question, written test; and a 1-hour OJT tour with an instructor observer.

4.3.3.2. A current controller may perform instructor observer duties, but he or she will not simultaneously control traffic and conduct observer upgrade training.

4.3.3.3. Night requalification requires an additional 2-hour night tour.

**4.4. Training Documentation.** Each RSUTO will maintain a training record for each controller, monitor, and observer trainee. The folder will be kept as long as the individual is an active controller, monitor, or observer and will be sent with the individual when he or she is transferred intracommand. The record will include:

4.4.1. AETC Form 393, **RCS/RSU Controller Record of Training**, to record items accomplished during OJT tours. Items and procedures peculiar to the local area will be added to the bottom or back of the form or to a supplemental sheet.

4.4.2. AF Form 4293, **Student Activity Record**, to record comments on the trainee's progress after each OJT tour. As a minimum, comments will address unusual occurrences, strengths and weaknesses, and any applicable restrictions. A locally produced form (approved in advance by HQ AETC/DOFV) may be used in place of the AF Form 4293.

4.4.3. AETC Form 309 to document evaluation performance. Each performance will be rated as "qualified" or "unqualified." Outstanding performance will be documented. The Letter of Xs will reflect qualification.

4.4.4. A statement of requalification for each episode of lost currency.

## Chapter 5

### CURRENCY REQUIREMENTS AND RESTRICTIONS

**5.1. Currency Documentation.** The RSU program manager will establish a currency requirement tracking system for all personnel in the RSU program. This system will allow for easy review of data relating to the number of tours accomplished, duration, dates of tour, etc. **NOTE:** When accomplishing recurrency or requalification tours, both the instructor and trainee must log the tour in order to verify proper completion of requalification training.

#### **5.2. Flight Currency, Medical, and Crew Duty Day Restrictions:**

5.2.1. If an individual is grounded for an extended period, the OG/CC may waive flying or ground currency requirements for the purpose of RSU controller, monitor, or observer duty. This waiver will be maintained in the individual's training folder. During this period, the individual will satisfy all other RSU duty prerequisites (go/no-go items, RSU meeting attendance, etc.). **EXCEPTION:** Individuals with expired flight evaluations will not perform RSU duty.

5.2.2. RSU crewmembers medically excused from flying duty or grounded may not perform RSU duty without specific written clearance from the flight surgeon.

5.2.3. RSU crewmembers are not permitted to perform RSU duty if such duty will extend their crew duty period beyond 12 hours. **NOTE:** RSU duty is a flying-related activity and will be considered when scheduling instructors and students (for student night flying operations, etc.).

#### **5.3. Controller Currency:**

5.3.1. To satisfy minimum currency requirements, controllers will perform Class A RSU duties for at least 1 hour every 30-calendar days (45 days for the 12 FTW). A full-length, regularly scheduled tour is the preferred method for updating controller currency. A controller performing instructor duties may log a tour to meet this requirement. **NOTE:** Initial currency is based on the date of the initial evaluation, not the date the OG/CC signs the AETC Form 309.

5.3.2. If 30 days pass without performing controller duties (45 days for the 12 FTW), the controller will undergo refresher training to include a review of applicable RSU publications and a 1-hour OJT tour under the supervision of a current instructor controller. Loss of currency and recurrency will be documented in the individual training record.

5.3.3. If 60 days pass without performing controller duties, the controller will undergo refresher training of at least two 2-hour tours under the supervision of an instructor controller and successfully complete a requalification performance evaluation. In addition, an oral examination, a written examination, and APU refresher training (if applicable) will be accomplished. The periodic evaluation zone will be based on this new qualification date. (The OG/CC may waive any part of this requirement.) Loss of currency and recurrency will be documented in the individual training record.

5.3.4. If more than 90 days pass without performing controller duties, the controller will complete nonwaiverable requalification training in accordance with paragraph 4.1.2. The periodic evaluation zone will be based on this new qualification date. A comment will be placed in AETC Form 309 with the reason for requalification.

5.3.5. The SQ/CC will review each instance of lost currency and ensure it is documented in the individual's training record.

5.3.6. The OG/CC will review the training record and circumstances for an individual who exceeds 90-day currency to determine his or her suitability to remain in the RSU program. This review will be documented in the individual's training record.

#### **5.4. Monitor Currency:**

5.4.1. To satisfy minimum currency requirements, each monitor will perform RSU duty at least once every 45 days. A monitor performing instructor duties may log a tour to meet this requirement. A monitor may hold dual qualification as an observer as long as he or she maintains currency requirements in both positions. That is, monitor duty does not satisfy observer currency requirements and vice versa.

5.4.2. If 45 days pass without performing monitor duties, the monitor must undergo refresher training to include a review of applicable RSU publications and a 1-hour OJT tour under the supervision of a current instructor controller or instructor monitor. **NOTE:** Controllers may perform instructor monitor duties, but they will not simultaneously control traffic and conduct monitor upgrade training.

5.4.3. If more than 60 days pass without performing monitor duties, the monitor will complete refresher training to include a 1-hour requalification tour, an oral evaluation, and a written examination.

5.4.4. The SQ/CC will review each instance of lost currency and ensure it is documented in the individual's training record.

#### **5.5. Observer Currency:**

5.5.1. To satisfy minimum currency requirements, each observer will perform RSU duty at least once every 45 days. An observer performing instructor duties may log a tour to meet this requirement. An observer may hold dual qualification as a monitor as long as he or she maintains currency requirements in both positions. That is, observer duty does not satisfy monitor currency requirements and vice versa.

5.5.2. If 45 days pass without performing observer duties, the observer must undergo refresher training to include a review of applicable RSU publications and a 1-hour OJT tour under the supervision of a current instructor controller or instructor observer. **NOTE:** Controllers may perform instructor observer duties, but they will not simultaneously control traffic and conduct observer upgrade training.

5.5.3. If more than 60 days pass without performing observer duties, the observer will complete refresher training to include a 1-hour requalification tour, an oral evaluation, and a written examination.

5.5.4. The SS/CC will review each instance of lost currency and ensure it is documented in the individual's training record.

#### **5.6. Quarterly RSU Standardization Meeting:**



5.6.1. Quarterly RSU standardization meetings will be conducted at a time and place that will ensure maximum attendance. As a minimum, an emergency scenario, trends, and current issues will be included. Discussion of how solos may complicate the scenario is recommended.

5.6.2. Attendees will include all RSU-qualified IP crewmembers, the OG/CC or CD, the respective SQ/CC or DO, and the OGV program manager. A process will be developed to ensure RSU crewmembers not in attendance read and initial the meeting minutes prior to their next RSU tour. Valid reasons for absence are TDY, duty not including flying (DNIF) to quarters, and reservists not available for duty. **EXCEPTION:** Randolph PIT trainees are not required to attend. However, meeting minutes must clearly communicate all pertinent aspects of the meeting, particularly emergency procedure discussions and resolutions.

### **5.7. Controller Performance Evaluations:**

5.7.1. The evaluation zone will be established from the 12th through the 17th month from the initial or previous evaluation. The examinee must demonstrate the ability to perform controller duties and as well as a full knowledge of applicable directives, aircraft performance characteristics, operating limitations, emergency procedures, and APU procedures (if applicable).

5.7.2. Evaluation performance will be documented on the AETC Form 309, and the form will be routed through the OG/CC for signature. Initial and periodic performance evaluation prerequisites are an oral evaluation; a 25-question, written test based on controller responsibilities; and a review of appropriate RSU directives.

### **5.8. Controller No-Notice Evaluations:**

5.8.1. Each RSUTSO and RSUTO will conduct no-notice evaluations. The no-notice program has three parts: followup monitoring of individuals with previously identified deficiencies, evaluations associated with local unit evaluations, and random sampling of the assigned RSU crew force (quality of force). The no-notice program will include sufficient controller evaluations to ensure quality of force is maintained.

5.8.2. No-notice evaluations should not be used as a scheduling tool to satisfy periodic evaluation requirements. Administered correctly, no-notice evaluations may count for the periodic evaluation if all other evaluation requirements are completed within 30 calendar days of the evaluation.

5.8.3. The new evaluation zone will be based on the date of the no-notice evaluation.

## Chapter 6

### TRAFFIC PATTERN OPERATIONS

**6.1. Conduct of Operations:** (NOTE: When established within Class C airspace, RSU patterns will be conducted within practice areas as defined in local operating agreements. Participating local aircraft in the practice areas are exempt from Class C services and will instead operate according to local guidelines.)

6.1.1. RSU patterns exist to facilitate safe and efficient VFR traffic pattern operations. RSU personnel will use preventive control procedures to ensure flight safety within the RSU pattern, but are not responsible for individual aircrew training requirements. The following are examples of preventive control:

6.1.1.1. Denying closed requests with aircraft on initial.

6.1.1.2. Denying closed requests with straight-in traffic between 9 and 4 miles from touchdown (5 and 2 miles for T-6s and T-37s).

6.1.1.3. Denying late closed requests.

6.1.1.4. Denying straight-in requests or clearance.

6.1.1.5. Preventing aircraft from initiating the break with straight-in traffic between 9 and 4 miles from touchdown (5 and 2 miles for T-6s and T-37s).

6.1.2. Under most circumstances, preventive control and standard RSU radio terminology ([Attachment 4](#)) should be adequate to safely control the pattern. However, improper actions by aircrew and/or RSU personnel do occur and may sometimes lead to pattern conflicts. In these situations, RSU personnel must intervene immediately, using whatever means necessary (including “plain English”) to resolve the conflict. The following transmissions are examples of what may be necessary to resolve conflicts in the RSU pattern:

6.1.2.1. Controller: “Straight-in, say range.”

6.1.2.2. Controller: “Final turn, roll wings level, disregard ground track, go-around.”

6.1.2.3. Observer: “Turning crosswind use caution, there are two of you.”

6.1.2.4. Observer: “Departure leg monitor ground track.”

### 6.2. Aircraft Control:

6.2.1. RSUs will control aircraft according to procedures in this chapter.

6.2.2. Local aircraft under tower control and transient aircraft will be controlled according to applicable Air Force and FAA air traffic control publications. **NOTE:** Controllers must be aware that wind gust reporting procedures and reduced same runway separation rules are two areas in which tower operations differ considerably from RSU procedures.

6.2.3. RSU controllers will not clear an aircraft for a low approach (less than 500 feet above ground level [AGL]) directly over a transient aircraft departing, landing, or taxiing on the runway.

6.2.4. RSU controllers will not authorize a landing aircraft to cross the threshold until a preceding transient aircraft clears the runway.

6.2.5. RSU crews will maintain a separate traffic count for each Class A RSU controlled runway. Count one movement for each takeoff or landing. A touch-and-go landing or low approach will be counted as two events. All aircraft in formation will be counted as one aircraft.

6.2.6. RSU crews will use AETC Form 355 or equivalent to record flight-following information, documentation of upgrade tours, recurrency and requalification, time in and time out of the facility, and comments on individual aircrew performance. AETC Form 355 or equivalent will be maintained for 1 year. When documenting recurrency or requalification tours on AETC Form 355 or equivalent, both the instructor and trainee must log the tour in order to verify training.

### **6.3. Procedures at UFT Bases:**

6.3.1. Each base will establish procedures to provide positive separation between RSU-controlled traffic and transient aircraft under tower or approach control.

6.3.2. Air traffic facilities will coordinate radar approaches to RSU-controlled runways as follows: (**NOTE:** The request-and-acknowledge system at Sheppard AFB satisfies the communications requirement of this paragraph.)

6.3.2.1. Approaches under tower and radar control will not be integrated with RSU-controlled traffic unless direct communication is established between the RSU, tower, and radar facility.

6.3.2.2. To ensure proper sequencing of arriving radar traffic with RSU-controlled traffic, radar and RSU controllers will coordinate as follows:

6.3.2.2.1. At a specified position, the radar controller will establish initial contact with the RSU and provide identification, position, and type of approach of the aircraft under radar control. The RSU will be told when the aircraft is 9 miles from touchdown (5 miles for T-6s and T-37s). The RSU will also be told when the aircraft is 4 miles from touchdown (2 miles for T-6s and T-37s).

6.3.2.2.2. The RSU will acknowledge each position report and issue appropriate traffic advisories and field information. In no case will a radar approach be continued closer than 3 miles from touchdown unless coordinated with the RSU controller.

6.3.2.2.3. During T-38 night straight-in approaches, only one coordination call from the tower or radar to the RSU is required. This call will be made no closer than 5 miles from touchdown and will include the frequency assigned to the aircraft nearest touchdown.

6.3.3. Straight-in aircraft will report 9 and 4 miles from touchdown (5 and 2 miles for T-6s and T-37s). RSU controllers will clear aircraft requesting a straight-in not later than when the aircraft is 9 miles from touchdown (5 miles for T-6s and T-37s). RSU crews will not allow aircraft to commence the break or depart high key with straight-in traffic between 9 and 4 miles (5 and 2 miles for T-6s and T-37s). Local procedures will be established to accommodate cancellation of a straight-in clearance.

6.3.4. RSU controllers must evaluate each minimum fuel situation in light of existing conditions and determine the extent to which aircraft will be given special handling. When a pilot declares minimum fuel, other approaches and landings may continue. However; if a traffic conflict exists or is anticipated, minimum fuel aircraft must be given landing priority. RSU controllers will acknowledge the initial minimum fuel call.

6.3.5. On arrival in the pattern, emergency aircraft will be given traffic priority. When emergency situations arise, controllers will not attempt to maintain the normal volume and pace of pattern operations. To maintain situational awareness on the emergency aircraft, any combination of the following should be considered: stop launch, restricted low approach, and straight through initial. Time permitting, emergency procedures will be reviewed with the aircraft and actions coordinated with the SOF.

6.3.6. When an emergency aircraft in the VFR pattern requires airborne assistance, an aircraft with an instructor on board will be designated to fly as chase. When an aircraft is disabled on or near a runway, normal traffic pattern operations will be discontinued. Subsequent control decisions will be based on the status of the distressed aircraft. Chiefs of airfield management or their representatives are responsible for authorizing resumption of normal runway operations.

6.3.7. Formations will be controlled as a unit. However, after formation aircraft have split up, the guidance for reduced same runway separation (RSRS) in [Attachment 5](#) will apply.

6.3.8. Procedures for RSU takeoff clearance are as follows:

6.3.8.1. No more than four aircraft are permitted on the runway in takeoff position at the same time. At night, no more than one aircraft (or one element of two aircraft) is permitted on the runway at one time.

6.3.8.2. RSU controllers may authorize aircraft to taxi into position and hold when takeoff clearance cannot be issued because of other traffic.

6.3.8.3. RSU controllers may authorize aircraft to taxi into takeoff position and hold when restricted low approach traffic is on final. They will not clear aircraft for takeoff until proper separation is ensured with restricted low approach aircraft.

6.3.9. Departure and arrival separation will be accomplished as specified in [Attachment 5](#).

6.3.10. Procedures for anticipating separation are as follows:

6.3.10.1. Takeoff or landing clearance need not be withheld until prescribed separation exists if there is reasonable assurance that required separation will exist when the aircraft starts a takeoff roll or crosses the landing threshold. Landing clearance may be issued to a radar-controlled aircraft when the aircraft is 3 miles from touchdown even though a preceding aircraft has not crossed the landing threshold if there is reasonable assurance that prescribed separation will exist when the radar-controlled aircraft crosses the threshold.

6.3.10.2. The RSU controller may not issue a clearance that requires a provisional or conditional phrase. Specific guidance, such as "abort" or "go-around," should be used. (See [Attachment 4](#) for standard RSU phraseology.)

6.3.11. Instrument and straight-in approaches will not be allowed to proceed inside 4 miles (2 miles for T-6s and T-37s) from the time a four-ship formation pitches until number four has initiated the turn to final.

6.3.12. Closed traffic procedures are as follows:

6.3.12.1. Aircraft will not be cleared for closed traffic or low key with another aircraft on initial prior to the break, with straight-in traffic between 9 and 4 miles (5 and 2 miles for T-6s and T-37s), or with an aircraft between initial and halfway between high key and low key.

- 6.3.12.2. Caution must be used when clearing closed traffic with two aircraft on departure leg. If there is a question as to which aircraft has requested a closed, the controller will not issue a clearance until the question is resolved.
- 6.3.13. Straight-in requests will not be approved with an aircraft between "report high key" and high key.
- 6.3.14. Aircraft will not be cleared for an emergency landing pattern (ELP) with an aircraft in the high pattern.
- 6.3.15. When the aircrew reports or the controller directs a low approach, the aircraft will not touch down. During local flying operations when the aircrew is directed to make a restricted low approach, the aircraft will descend no lower than 500 feet AGL. (The controller may specify higher.) Aircraft making a restricted low approach with an aircraft in takeoff position must clear the runway, safety of flight permitting.
- 6.3.16. The RSU controller's silence to the pilot's "gear down" call is an implied clearance to land, which may be modified by oral communications.
- 6.3.17. RSU controllers will refrain from soliciting early turnoffs or instructing aircrews to clear the runway faster than normal.
- 6.3.18. RSU controllers may request T-6 and T-37 aircrews to turn off strobe lights during hours of darkness while in the home-base traffic pattern.

#### **6.4. Concurrent T-6 and T-37 Operations:**

- 6.4.1. T-6 and T-37 aircraft may operate in the same RSU pattern concurrently.
- 6.4.2. For a T-6 or T-37 to operate in the RSU pattern, the controller or observer must be current and qualified in that aircraft type. For example, if both aircraft are present and the controller is T-6 qualified, the observer must be T-37 qualified. If there are only T-37s in the pattern, either the controller or the observer must be current and qualified in the T-37.
- 6.4.3. If the controller is current and qualified in the T-37, but will be controlling T-6s, he or she must have completed a T-6 familiarization training program developed by the RSUTSO. As a minimum, this training program will include:
- 6.4.3.1. A review of T-6 aircraft operations and capabilities.
  - 6.4.3.2. A review of T-6 ELP procedures, to include discussion on how to integrate ELP training into pattern operations; the relationship of aircraft flying ELPs to those on straight-ins, initial, or requesting closed; and acceptable configurations and glidepaths on final.
  - 6.4.3.3. A review of T-6 configurations, pattern types, and spacing standards.
  - 6.4.3.4. A 1-hour OJT tour controlling T-6 aircraft under the supervision of a T-6 qualified instructor controller, including aircraft flying ELPs.
- 6.4.4. If the controller is current and qualified in the T-6, but will be controlling T-37s, he or she must have completed a T-37 familiarization program developed by the RSUTSO. As a minimum, this training program will include a review of T-37 aircraft operations, capabilities, configurations, pattern types, and spacing standards.

6.4.5. Observers must review aircraft configurations, pattern types, and spacing standards for the aircraft in which he or she is not qualified.

6.4.6. Concurrent pattern operations training will be annotated in the controller's or observer's training record, as applicable.

6.4.7. No additional responsibilities or restrictions apply for the recorder.

6.4.8. The spotter may be from either aircraft type, but must receive a briefing on proper configuration checks for the aircraft he or she will be operating in the pattern during the tour.

## Chapter 7

### LOCAL AREA PROCEDURES

**7.1. Terminal Instrument Procedures (TERPS).** The airfield operations flight commander provides TERPS service according to AFJMAN 11-226, *United States Standard for Terminal Instrument Procedures (TERPS)*, and AFMAN 11-230, *Instrument Procedures*, for any procedure designed for instrument approach or departure of aircraft; that is, nonprecision and precision approaches and standard instrument departures.

**7.2. Aircraft Traffic Patterns.** **Attachment 6** of this publication establishes home and auxiliary field traffic patterns for T-1, T-6, T-37, and T-38 aircraft. In addition, the following rules apply to these aircraft:

7.2.1. Aircraft departing under RSU control must remain in visual meteorological conditions (VMC) until the departure control facility establishes radio and radar contact with the aircraft. Military assumes responsibility for separation of aircraft (MARSAs) will apply until standard instrument flight rules (IFR) separation is established. Each base will also designate points at which aircraft normally terminate IFR service on arrival.

7.2.2. Aircraft of like type in the terminal area (not under radar or tower control) must maintain a specified airspeed on designated ground tracks and adhere to established altitudes.

7.2.3. The number of aircraft in the VFR traffic pattern is limited to 12 T-6s (and/or T-37s), 12 T-38s, or 10 T-1s. The night VFR traffic pattern for each aircraft is limited to 8 aircraft.

7.2.4. UFT aircraft may remain in formation in the traffic pattern unless the RSU controller or tower directs otherwise.

7.2.5. A common initial with opposite direction breaks for single runway operations will not be established. (Auxiliary fields are exempt.)

7.2.6. When weather prevents the use of established pattern breakout procedures, a restricted pattern may be flown if the following requirements are satisfied:

7.2.6.1. The existing ceiling is at least 500 feet above pattern altitude.

7.2.6.2. Pattern entries will only be made (1) from initial takeoff, (2) via a crosswind entry or closed from a parallel runway, or (3) from a straight-in approach (if procedures are established to prevent a traffic conflict).

7.2.6.3. Traffic pattern is limited to 8 aircraft.

7.2.6.4. Solo student sorties are prohibited.

7.2.6.5. Night overhead and visual straight-in approaches will not be flown simultaneously to the same runway. (Randolph AFB is exempt.)

**7.3. Forms Prescribed.** AETC Forms 309, 355, 360, 393, and 1163.

**7.4. Forms Adopted.** AFTO Form 95 and AF Form 4293.

THOMAS J. QUELLY, Colonel, USAF  
Deputy Director of Operations



**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 11-2, Aircraft Rules and Procedures  
AFJMAN 11-226, United States Standard for Terminal Instrument Procedures (TERPS)  
AFMAN 11-230, Instrument Procedures  
AFJMAN 32-8008, Volume 1, General Provisions for Airfield/Heliport Pavement Design  
AFI 13-203, Air Traffic Control, and its AETC supplement  
AFI 31-101, The Air Force Physical Security Program (FOUO)  
AFMAN 37-139, Records Disposition Schedule (will become AFMAN 33-322, Volume 4)  
AFMAN 91-201, Explosives Safety Standards, and its AETC supplement

***Abbreviations and Acronyms***

**ADO**—assistant director of operations  
**AGL**—above ground level  
**AOR**—area of responsibility  
**ASR**—airport surveillance radar  
**AT**—additional training  
**CAP**—commander's awareness program  
**CC**—commander  
**CRM**—cockpit/crew resource management  
**DO**—director of operations  
**FAA**—Federal Aviation Administration  
**FTS/CC**—flying training squadron commander  
**IFR**—instrument flight rules  
**IP**—instructor pilot  
**LOA**—letter of agreement  
**OG/CC**—operations group commander  
**OGV**—operations group standardization/evaluation  
**OJT**—on-the-job training  
**ORM**—operational risk management  
**PIT**—pilot instructor training

**RCS**—runway control structure

**RSRS**—reduced same runway separation

**RSU**—runway supervisory unit

**RSUTO**—RSU training officer

**RSUTSO**—RSU training and standardization officer

**SOF**—supervisor of flying

**SQ/CC**—squadron commander

**TERPS**—terminal instrument procedures

**UFT**—undergraduate flying training

**VFR**—visual flight rules

**Attachment 2****RSU INSPECTION CHECKLIST**

**A2.1. Daily and Monthly Checks.** The RSU facility officer will check the following items monthly at each RSU: (**NOTE:** The RSU daily opening checklist will incorporate the asterisked [\*] items below.)

**A2.1.1. Exterior.** Check the following for proper operations and/or conditions:

- A2.1.1.1. Power hookup, external wiring and proper ground.
- A2.1.1.2. Guys and mounts in place (in mobile units).
- A2.1.1.3. Wind-measuring equipment.\*
- A2.1.1.4. Communications antennas.\*
- A2.1.1.5. Obstruction lights.\*
- A2.1.1.6. Flare warning signs.\*
- A2.1.1.7. Portable toilet facility.
- A2.1.1.8. Unit exterior, including floor support in mobile units.
- A2.1.1.9. Auxiliary power unit operation or power transfer, if applicable.

**A2.1.2. Air-Conditioner or Heater:**

- A2.1.2.1. Proper operation.\*
- A2.1.2.2. Filters.
- A2.1.2.3. Duct condition.

**A2.1.3. Radio Equipment:**

- A2.1.3.1. Equipment bay (visual check), as follows:
  - A2.1.3.1.1. Equipment secure in racks.
  - A2.1.3.1.2. Adequate cooling.
  - A2.1.3.1.3. Evidence of water leakage.
  - A2.1.3.1.4. Condition of wiring.
- A2.1.3.2. Console, as follows:
  - A2.1.3.2.1. Equipment operational.\*
  - A2.1.3.2.2. Switches properly labeled.\*
  - A2.1.3.2.3. Microphones and headsets for the correct number and condition.\*

**A2.1.4. Unit Interior:**

- A2.1.4.1. General condition and cleanliness.\*
- A2.1.4.2. Windows clean and no faults.\*
- A2.1.4.3. Window shade operation and condition.

- A2.1.4.4. Evidence of water leakage.
- A2.1.4.5. Proper flare storage.
- A2.1.4.6. Telephone and hotline operation.\*
- A2.1.4.7. Wind equipment operational.\*
- A2.1.4.8. BAK-15 Barrier (operations check in accordance with paragraph [2.4.5.11.](#) ).
- A2.1.4.9. Flares.\*
- A2.1.4.10. Publications and forms.\*
- A2.1.4.11. Light gun.\*
- A2.1.4.12. Binoculars, if maintained in the RSU.\*
- A2.1.4.13. Fire extinguishers.\*
- A2.1.4.14. Chairs.

**A2.2. Recording Discrepancies.** Discrepancies will be recorded on the unit's AETC Form 360 and reported to the agency responsible for corrective action and/or RSU facility officer (as specified locally).

### Attachment 3

#### SYLLABUS REQUIREMENTS FOR RSU CONTROLLER CANDIDATES

**A3.1. Training Requirements.** The following minimum requirements will be included in the local syllabus of instruction to upgrade RSU controller candidates: (**NOTE:** Additional training (AT) or procedures peculiar to the local area will be added as necessary.)

A3.1.1. Trainees must complete a minimum of nine daylight OJT tours (a minimum of 2 hours each) within 45 calendar days. This is not waivable without OG/CC review. The objective is to schedule tours to ensure continuity of training. Trainees who do not complete the training within 45 days will be reviewed by the SQ/CC, who will determine their suitability for continued training. If trainees are retained, the SQ/CC will make recommendations for AT. Circumstances and AT requirements will be documented in the individual's training record. Before controlling traffic at night, a minimum of one night OJT tour (for a minimum of 2 hours) is required (paragraph [A3.5.](#) ). **NOTE:** The 558th and 560th FTS controllers are exempt from night requirements.

A3.1.2. Four daylight tours will be completed prior to accomplishing a night tour.

A3.1.3. Day tours and evaluations must be completed during periods when the status of flying permits an overhead pattern. The trainee is normally limited to one upgrade tour per day. Although highly discouraged, an OG/CC may authorize an additional tour based on unique training circumstances. However, such a practice will not be conducted on a routine basis.

A3.1.4. The trainee will receive OJT by actually controlling traffic while under direct supervision of an instructor controller. The instructor retains responsibility for a safe traffic pattern and will take control of the pattern if the trainee does not adequately respond to the situation. The training program should include provisions to ensure the trainee's familiarity with his or her responsibilities when performing the monitor function.

A3.1.5. Documentation showing the trainee's progress will be maintained to ensure completion of all syllabus requirements before an evaluation.

A3.1.6. Controllers transferred intracommand will receive sufficient training to ensure their familiarity with local operations.

A3.1.7. Additional manning in the RSU during OJT tours will not be used as a substitute for normal manning requirements.

**A3.2. Orientation.** The trainee will:

A3.2.1. Receive a briefing from the RSUTSO or RSUTO about the controller training program and the RSU's role in the student training environment.

A3.2.2. Study appropriate publications concerning RSU operations.

A3.2.3. Be encouraged to visit the tower and terminal radar facility to observe terminal activities and the interface with RSU operations.

**A3.3. OJT Tour 1.** The trainee will be briefed on and observe the crew briefing, RSU and APU preflight checks, and crew changeover procedures. He or she will practice controlling VFR traffic.

**A3.4. OJT Tours 2 Through 9.** The trainee will:

A3.4.1. Practice subjects previously introduced, to include procedures for beginning and terminating RSU operations.

A3.4.2. Practice controlling VFR traffic.

A3.4.3. Be briefed on and/or practice and have a thorough understanding of the following:

A3.4.3.1. Supervision, coordination, and discipline of the RSU crew.

A3.4.3.2. Assuming and relinquishing runway control.

A3.4.3.3. Coordination with other air traffic control agencies and the SOF.

A3.4.3.4. Local landmarks, techniques, and guidance to safely facilitate normal traffic flow while maintaining specified separation standards and sequencing.

A3.4.3.5. Traffic pattern priorities and breakouts.

A3.4.3.6. Transient and civilian aircraft procedures.

A3.4.3.7. Runway change procedures.

A3.4.3.8. Reporting RSU discrepancies.

A3.4.3.9. Control of ground aborts.

A3.4.3.10. Control of emergency aircraft, including aircraft chase procedures.

A3.4.3.11. Overdue aircraft.

A3.4.3.12. Lost student assistance.

A3.4.3.13. Single and dual runway operations.

A3.4.3.14. Situations that could result in a potential stall (tight downwinds, slow finals, etc.) and controller actions to prevent or correct the situation.

A3.4.3.15. Specific guidance on when to issue go-around instructions.

A3.4.3.16. Flying status changes.

A3.4.3.17. Weather recall and diversion procedures.

A3.4.3.18. Local contingency plans (Broken Arrow, SCATANA, etc.).

A3.4.3.19. RSU radio and power failure.

A3.4.3.20. RSU administrative duties.

A3.4.3.21. Radio terminology.

A3.4.3.22. Local potential traffic conflicts (final turn versus straight-in, etc.).

A3.4.3.23. Monitoring of and responsibility for solo traffic.

A3.4.3.24. Recovery of radio-out aircraft.

A3.4.3.25. Handling and storage of flare pistols and flares.

A3.4.3.26. Use of AETC Form 355.

**A3.5. OJT Tour 10 (2 Hours Minimum at Night).** This lesson may be accomplished anytime during scheduled night flying—after completing four OJT tours and before assuming unsupervised controller duties at night. Completion of this tour is desired, but is not a prerequisite for the controller's initial evaluation.

A3.5.1. The trainee will be briefed on the following procedures as they differ from daytime procedures:

A3.5.1.1. Traffic patterns.

A3.5.1.2. Common pilot errors.

A3.5.1.3. Separation standards.

A3.5.1.4. Emergency procedures.

A3.5.1.5. RSU lighting.

A3.5.1.6. RSU duties and responsibilities.

A3.5.2. The trainee will practice controlling and monitoring night traffic, as applicable.

**A3.6. OJT Tour 11 (2 Hours Minimum at an Auxiliary Field).** This lesson must be accomplished only if aircraft flown by the trainee uses an auxiliary field. The tour may be accomplished anytime after the trainee completes four OJT tours, and it is a prerequisite to assuming unsupervised controller duties at the auxiliary field. Completion of this tour is desired, but not a prerequisite for the controller's initial evaluation.

A3.6.1. The trainee will be briefed on procedures at the auxiliary field as they differ from those at the home field.

A3.6.2. The trainee will practice controlling traffic at the auxiliary field.

## Attachment 4

## STANDARD RSU RADIO TERMINOLOGY

**A4.1. Overview.** Table A4.1. through Table A4.5. contain standard RSU radio terminology. However, this terminology is not intended to cover every situation or restrict the use of additional terms. When communicating with aircrews, RSU controllers are expected to use good judgment and have the flexibility to use concise, common-sense, directive language appropriate for the situation. They must use timely, clear, concise, standard terminology that communicates the same meaning to all AETC crews.

**Table A4.1. Standard RSU Terminology Used To Identify Aircraft Positions.**

I T E M	A	B
	Aircraft Position	Standard RSU Terminology
1	On the taxiway or runup area before being cleared on or across the active runway	“Holding for the active . . .” (may be prefaced with relative position; for example, No. 1, 2, or 3)
2	On the taxiway or taxiing onto the runway after being cleared on	“Taking the active . . .” (may be prefaced with relative position; for example, No. 1, 2, or 3)
3	In departure position before brake release	“Departure position . . .”
4	On runway after brake release for departure	“Departure roll . . .”
5	Airborne after departure, but not yet started to turn out of traffic	“Departure leg . . .”
6	On crosswind after completing turn from takeoff leg	“Crosswind . . .”
7	Established between 9 and 4 miles (or 5 and 2 miles for T-6s and T-37s) on straight-in ground track	“Straight-in . . .”
8	In pullup to closed downwind	“Pulling closed . . .”
9	On inside downwind after closed pattern or break turn from initial	“Inside downwind . . .”
10	On downwind after completing the turn from a pattern or VFR entry leg or crosswind.	“Outside downwind . . .”
11	Initiating final turn	“Starting final turn . . .”
12	After established in final turn	“Final turn . . .”
13	After initiating rollout to final approach	“Rolling out on final . . .” (Also take into account overshooting final turns.)
14	After wings level on final approach	“Final . . .”



<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>Aircraft Position</b>	<b>Standard RSU Terminology</b>
<b>15</b>	Approaching overrun	“Short final . . . .”
<b>16</b>	Over the overrun on final approach	“Overrun . . . .”
<b>17</b>	After starting roundout or flare for landing	“Flare . . . .”
<b>18</b>	Landing roll	“Landing roll . . . .”
<b>19</b>	Aircraft on go-around from final turn	“On the go from final turn . . . .” (normally used to inform pilot of other traffic or aircraft configuration)
<b>20</b>	Aircraft on go-around from final approach	“On the go from final approach . . . .” (normally used to inform pilot of other traffic or aircraft configuration)
<b>21</b>	Aircraft on go-around displaced from the runway inside the pattern	“Offset . . . .”
<b>22</b>	Aircraft turning initial, but not yet wings level.	“Turning initial . . . .”
<b>23</b>	On initial, but not yet rolling into the break	“Initial . . . .”
<b>24</b>	Initiating bank for break until wings level on downwind	“In the break . . . .”

**Table A4.2. Terms Unique to Rectangular Patterns.**

<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>Aircraft Position</b>	<b>Standard RSU Terminology (note)</b>
<b>1</b>	Initiating turn to base	“Starting base turn . . . .”
<b>2</b>	After established in base turn	“Base turn . . . .”
<b>3</b>	After initiating rollout on base	“Rolling out on base . . . .”
<b>4</b>	After wings level on base	“Base . . . .”
<b>5</b>	Aircraft on go-around from base	“Aircraft on the go from base . . . .” (normally used to inform pilot of other traffic)

**NOTE:** This table is in addition to the terms listed in [Table A4.1](#).

**Table A4.3. Terms Unique to ELPs.**

<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>Aircraft Position</b>	<b>Standard RSU Terminology (note)</b>
<b>1</b>	Departing high key	“High key to low key . . . .”
<b>2</b>	Departing low key	“Low key to base key . . . .”
<b>3</b>	Departing base key	“Base key to final . . . .”
<b>4</b>	After wings level on final approach	“ELP final . . . .”

**NOTE:** This table is in addition to the terms listed in [Table A4.1](#).

**Table A4.4. Standard RSU Directives and Pilot Response.**

<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>RSU Directive</b>	<b>Pilot Response</b>
<b>1</b>	“Hold short”	“CALL SIGN, holding short”
<b>2</b>	“Taxi into position and hold”	“CALL SIGN, on to hold”
<b>3</b>	“Cleared for takeoff”	“CALL SIGN, cleared for takeoff”
<b>4</b>	“Abort”	Discontinues takeoff (if appropriate)
<b>5</b>	“Go-around”	Discontinues approach or landing and initiates procedures to become or remain airborne
<b>6</b>	“Standby”	Continues straight ahead or turns crosswind
<b>7</b>	“Continue straight ahead”	Continues straight ahead
<b>8</b>	“Say range”	States distance from the threshold
<b>9</b>	“Monitor altitude”	Climbs or descends as necessary to comply with local altitude restrictions (if able)
<b>10</b>	“Monitor ground-track”	Turns aircraft to maintain published ground track (if able)
<b>11</b>	“Lower nose”	Decreases pitch attitude
<b>12</b>	“Roll wings level” or “Roll out”	Rolls wings to level flight
<b>13</b>	“Disregard ground track”	Clears the flightpath. Does not exceed aircraft performance capabilities in order to maintain pattern ground track
<b>14</b>	“Breakout”	Leaves traffic pattern as specified in local pattern directives

<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>RSU Directive</b>	<b>Pilot Response</b>
<b>15</b>	“Cleared low approach”	Continues approach, but does not touch down
<b>16</b>	“Cleared restricted low approach”	Continues approach, but does not descend below assigned altitude

**Table A4.5. Standard Aircraft Request and/or Position Report and RSU Response.**

<b>I T E M</b>	<b>A</b>	<b>B</b>
	<b>Aircraft Request and/or Position Report</b>	<b>RSU Response</b>
<b>1</b>	“CALL SIGN, request closed” (“right or left” as required at auxiliary field)	“Closed approved” (“right/left” as appropriate at auxiliary field) or “negative closed”
<b>2</b>	“CALL SIGN, closed downwind”	(normally no response)
<b>3</b>	“CALL SIGN, gear down”	
<b>4</b>	“CALL SIGN, (position, as defined in local area procedures), request straight-in”	“Call 9/5 miles” (or as defined in local area procedures)
<b>5</b>	“CALL SIGN, 9/5 miles”	“Cleared straight-in, negative straight-in” (or as defined in local area procedures)
<b>6</b>	“CALL SIGN, 4/2 miles, gear down”	(normally no response)
<b>7</b>	“CALL SIGN, descending outside downwind”	
<b>8</b>	“CALL SIGN, (position) breaking out”	
<b>9</b>	“CALL SIGN, initial” (include fuel remaining if planning a full stop landing)	(normally no response unless an initial pattern entry)
<b>10</b>	“CALL SIGN, initial, request right/left break” (auxiliary field)	“Right/left break approved” (auxiliary field)
<b>11</b>	“CALL SIGN, initial, request high key”	“Report high key”
<b>12</b>	“CALL SIGN, high key”	“Report low key”
<b>13</b>	“CALL SIGN, low key, gear down”	(normally no response)
<b>14</b>	“CALL SIGN, request low/direct high key”	“Report low/high key”

**A4.2. Issuing Instructions.** When issuing instructions, RSU controllers will normally refer to the aircraft's position rather than its call sign. They will identify the source of the transmission when using a guard channel; for example, "Final, go-around, Westwind on guard." However, RSU controllers or

observers do not normally use terms such as “number one” or “number two” to identify a pattern position because pilots to whom instructions are issued may not know their relative position. To prevent confusion between pattern position and formation position, identify aircraft in formation by call sign.

**Attachment 5****REDUCED SAME RUNWAY SEPARATION (RSRS) FOR TRAINER-TYPE AIRCRAFT OPERATIONS****A5.1. Similar Trainer-Type Aircraft Operations:**

A5.1.1. Similar trainer-type RSRS may only be applied using alternate runway side procedures. Similar trainer-type aircraft are defined as aircraft with the same airframe; for example, T-38 to T-38 or AT-38, T-1A to T-1A, T-37 to T-37, and T-6 to T-6. **NOTE:** For the purposes of this instruction, T-6 and T-37 aircraft are considered similar.

A5.1.2. When alternate runway side procedures are used, RSRS for T-6, T-37, and T-38 patterns is 3,000 feet or when the preceding aircraft is airborne. When alternate runway side procedures are not used, the minimum RSRS is 6,000 feet. **NOTE:** T-1A aircraft will not use alternate runway side procedures. For a T-1A following a T-1A, the minimum RSRS is 6,000 feet or when the preceding aircraft is airborne.

A5.1.3. The use of alternate runway side procedures is an aircrew responsibility and must be addressed in local operating procedures.

A5.1.4. RSRS is not authorized for T-43 aircraft.

A5.1.5. An RSRS of 3,000-feet may be applied between a landing formation and a subsequent single aircraft (of a similar type) arrival or departure if both formation aircraft are positioned on the cold (exit) side of the runway. Ensure 6,000 feet RSRS when the subsequent aircraft is a formation flight.

**A5.2. Dissimilar Trainer-Type Aircraft Operations.** Separation for dissimilar trainer-type aircraft is 6,000 feet.

**A5.3. Night Operations.** During night operations, 6,000 feet is the minimum separation for all aircraft types.

## Attachment 6

### TRAFFIC PATTERNS FOR HOME AND AUXILIARY FIELDS

#### A6.1. T-6, T-37, and T-38 Aircraft:

A6.1.1. The T-6 and T-37 traffic pattern altitude is normally 1,000 feet AGL. The T-38 traffic pattern altitude is normally 1,500 feet AGL.

A6.1.2. An initial approach of 3 to 5 nautical miles, measured from the pitch point, will be established. Radar-controlled aircraft may enter the initial from either side if the entry point is located outside of VFR traffic.

A6.1.3. A VFR entry and reentry leg will be established that is entered from a turn from one side only. Aircraft entering on the VFR entry leg must be wings level on the entry leg at least 1 nautical mile prior to entering the pattern or converging with other aircraft and must give way to aircraft established in pattern.

A6.1.4. A common entry leg may be used for both VFR and radar sequence entries if right-of-way priorities are established where aircraft converge and provisions are made for aircraft forced to give way. Aircraft must be wings level at least 1 nautical mile prior to converging points and must converge at a 45-degree angle in level flight to facilitate clearing.

A6.1.5. Pattern right-of-way priorities, breakout, and go-around procedures will be established for aircraft that converge onto a common ground track. (**NOTE:** Units will develop local guidance to resolve conflicts between straight-in and final turn aircraft.) An aircraft:

A6.1.5.1. On a 90- or 45-to-initial that is giving way to aircraft on initial will climb a minimum of 500 feet and reenter at the VFR entry point, request radar initial, or fly straight through on an off-set initial, obtaining spacing and letting down to traffic pattern altitude during the turn to outside downwind.

A6.1.5.2. Giving way on VFR entry leg will climb a minimum of 500 feet and reenter in the VFR entry point.

A6.1.5.3. On a straight-in approach that perceives a conflict with an aircraft turning final will discontinue the approach and offset the ground track away from the final turn.

A6.1.5.4. Breaking out from inside or outside downwind will climb a minimum of 500 feet and reenter at the VFR entry point or request radar initial.

A6.1.5.5. Breaking out from low closed downwind will maintain 500 feet below pattern altitude and reenter at the VFR entry point or request radar initial.

A6.1.5.6. Breaking out of the traffic pattern will advise the controlling agency by position.

A6.1.6. Pattern spacing will normally be obtained by adjusting the position of the crosswind leg.

A6.1.7. Radar service may be terminated prior to actual pattern entry if the approach control facility establishes aircraft separation and sequencing prior to termination point and a prescribed ground track and airspeed are flown from termination point to the pattern.

A6.1.8. Weather minimums must ensure that VFR conditions, including required cloud clearance and visibility, can be maintained during all portions of the pattern.

A6.1.9. Procedures may be developed to permit pitchouts and closed patterns opposite the normal direction of break at auxiliary fields. Go-around, breakout, and reentry procedures must be established to prevent conflicts.

A6.1.10. Runway change procedures will be established to ensure an orderly transition to the new pattern.

## **A6.2. T-1 Aircraft:**

A6.2.1. The T-1 traffic pattern and outside downwind altitude is normally 1,500 feet AGL; the closed pattern altitude is normally 1,000 feet AGL.

A6.2.2. An initial approach of 3 to 5 nautical miles, measured from the pitch point, will be established. Radar-controlled aircraft may enter initial from either side if the entry point is located outside of VFR traffic.

A6.2.3. A VFR entry and reentry leg will be established that is entered from a turn from one side only. Aircraft entering on the VFR entry leg must be wings level on the entry leg at least 1 nautical mile prior to entering the pattern or converging with other aircraft and must give way to aircraft established in pattern.

A6.2.4. A common entry leg may be used for both VFR and radar sequence entries if right-of-way priorities are established where aircraft converge and provisions are made for aircraft forced to give way. Aircraft must be wings level at least 1 nautical mile prior to converging points and must converge at a 45-degree angle in level flight to facilitate clearing.

A6.2.5. Pattern right-of-way priorities and breakout procedures will be established for aircraft that converge onto a common ground track. An aircraft:

A6.2.5.1. In the overhead that is giving way to aircraft on final approach will climb 500 feet and reenter at the VFR entry point.

A6.2.5.2. In the closed pattern that is giving way to aircraft on final approach will maintain pattern altitude and reenter at the VFR entry point.

A6.2.5.3. That is giving way on VFR entry leg climb will 500 feet and reenter at the VFR entry point.

A6.2.5.4. On a straight-in approach that perceives a conflict with an aircraft turning final will discontinue the approach and offset the ground track away from the final turn.

A6.2.6. Pattern spacing will normally be obtained by adjusting the position of the crosswind leg.

A6.2.7. Radar service may be terminated prior to actual pattern entry if the approach control facility establishes aircraft separation and sequencing prior to termination point and a prescribed ground track and airspeed are flown from the termination point to the pattern.

A6.2.8. Weather minimums must ensure that VFR conditions, including required cloud clearance and visibility, can be maintained during all portions of the pattern.

A6.2.9. Runway change procedures will be established to ensure an orderly transition to the new pattern.